

IN THE CLAIMS:

1. (Currently Amended) A capsule endoscope apparatus ~~having an illuminating device, an image pick-up device for picking up an image of an illuminated portion, and a radio transmitting device, the capsule endoscope apparatus comprising:~~

~~thean~~ an illuminating device for irradiating illuminating light in a body cavity comprising a switching device which switches two or more light-emitting amount or light-emitting time; and

a switching device for switching illuminating conditions of the illuminating light irradiated by the illuminating device, the switching device being able to preset at least two different illuminating conditions and a switching order thereof, the switching device switching the illuminating conditions according to a set order;

an image pick-up device for sequentially picking up images of a subject, which is irradiated with illuminating light under the illuminating conditions which are different according to the switching by the switching device; and

a radio device which transmits by radio waves image data obtained by the image pick-up device upon sequentially switching the two or more light-emitting amount or light-emitting time.

2. (Currently Amended) A capsule endoscope apparatus according to Claim 1, wherein the at least two different illuminating conditions are a light-emitting amount or light-emitting time, the capsule endoscope further comprising:

a setting device which sets the light-emitting amount or light-emitting time.

3. (Original) A capsule endoscope apparatus according to Claim 2, wherein the setting device is a storing device which stores information for setting the light-emitting amount

or light-emitting time.

4. (Original) A capsule endoscope apparatus according to Claim 1, wherein the illuminating device comprises a white LED.

5. (Original) A capsule endoscope apparatus according to Claim 1, wherein the illuminating device comprises an electroluminescence.

6. (Currently Amended) A capsule endoscope apparatus according to Claim 1, wherein the at least two different illuminating conditions are a light-emitting amount or light-emitting time and a signal gain of the image pick-up device is proportional to the light-emitting amount or light-emitting time.

7. (Currently Amended) A capsule endoscope apparatus ~~having an illuminating device, an image pick-up device for picking up an image of an illuminated portion, and a radio transmitting device, the capsule endoscope apparatus comprising:~~

~~the an illuminating device for irradiating illuminating light in a body cavity comprising a switching device which switches two or more light-emitting amount or light-emitting time; and~~

a switching device for switching illuminating conditions of the illuminating light irradiated by the illuminating device, the switching device being able to preset at least two different illuminating conditions and a switching order thereof, the switching device switching the illuminating conditions according to a set order;

an image pick-up device for sequentially picking up images of a subject, which is irradiated with illuminating light under the illuminating conditions which are different according to the switching by the switching device;

a selecting device which extracts an image with a wide dynamic range from ~~the~~ two or more pieces of image data obtained by the image pick-up device ~~upon sequentially switching the two or more light-emitting amount or light-emitting time;~~ and

a radio device which transmits by radio waves the image data obtained by the selecting device.

8. (Currently Amended) A capsule endoscope apparatus according to Claim 7, wherein ~~the~~ a luminance distribution of the image data is used as a comparison standard for extracting the image with ~~the~~ a wide dynamic range by the selecting device.

9. (Currently Amended) A capsule endoscope apparatus ~~according to Claim 8,~~
having an illuminating device, an image pick-up device for picking up an image of an illuminated portion, and a radio transmitting device, the capsule endoscope apparatus comprising:

the illuminating device comprising a switching device which switches one of a light-emitting amount and a light-emitting time;

a selecting device which extracts an image with a wide dynamic range from the two or more pieces of image data obtained by the image pick-up device upon sequentially switching one of the light-emitting amount and light-emitting time; and

a radio device which transmits by radio waves the image data obtained by the selecting device;

wherein a luminance distribution of the image data is used as a comparison standard for extracting the image with a wide dynamic range by the selecting device and the selecting device selects the image data with ~~the~~ a widest luminance distribution of the image data.

10. (Currently Amended) A capsule endoscope apparatus according to Claim 7, wherein ~~the~~ an amount of data after compressing the image data is used as a comparison standard for extracting the image with ~~the~~ a wide dynamic range by the selecting device.

11. (Currently Amended) A capsule endoscope apparatus ~~according to Claim 10,~~
having an illuminating device, an image pick-up device for picking up an image of an
illuminated portion, and a radio transmitting device, the capsule endoscope apparatus
comprising:

the illuminating device comprising a switching device which switches one of a
light-emitting amount and a light-emitting time;

a selecting device which extracts an image with a wide dynamic range from the
two or more pieces of image data obtained by the image pick-up device upon sequentially
switching one of the light-emitting amount and light-emitting time; and

a radio device which transmits by radio waves the image data obtained by the
selecting device;

wherein an amount of data after compressing the image data is used as a
comparison standard for extracting the image with a wide dynamic range by the selecting device
and the selecting device selects the image having the a largest amount of the compressed image
data.

12. (Currently Amended) A capsule endoscope apparatus system ~~having an~~
~~illuminating device, an image pick-up device for picking up an image of an illuminated portion,~~
~~and a radio transmitting device, the capsule endoscope system comprising:~~

the an illuminating device for irradiating illuminating light in a body cavity
comprising a switching device which switches two or more light-emitting amount or light-

~~emitting time;~~

a switching device for switching illuminating conditions of the illuminating light irradiated by the illuminating device, the switching device being able to preset at least two different illuminating conditions and a switching order thereof, the switching device switching the illuminating conditions according to a set order;

an image pick-up device for sequentially picking up images of a subject, which is irradiated with illuminating light under the illuminating conditions which are different according to the switching by the switching device;

a radio device which transmits by radio waves the image data obtained by the image pick-up device;

~~a selecting device which transmits two or more pieces of image data obtained by the image pick-up device by the radio transmitting device upon sequentially switching the two or more light-emitting amount or light-emitting time, and extracts the an image with the a wide dynamic range from the two or more images-pieces of transmission image data transmitted by the radio device; and~~

~~a recording device which records the transmitted image data selected by the selecting device.~~

13. (Currently Amended) A capsule endoscope ~~system~~ apparatus according to Claim 12, wherein ~~the a~~ a luminance distribution of the transmitted image data is used as a comparison standard for extracting the image with the wide dynamic range by the selecting device.

14. (Currently Amended) A capsule endoscope system ~~according to Claim 13,~~
having an illuminating device, an image pick-up device for picking up an image of an

illuminated portion, and a radio transmitting device, the capsule endoscope system comprising:

the illuminating device comprising a switching device which switches one of a light-emitting amount and light-emitting time;

a selecting device which transmits two or more pieces of image data obtained by the image pick-up device by the radio transmitting device upon sequentially switching one of the light-emitting amount and light-emitting time, and extracts the image with a wide dynamic range from the two or more images transmitted by the radio transmitting device; and

a recording device which records the transmitted image data selected by the selecting device;

wherein a luminance distribution of the transmitted image data is used as a comparison standard for extracting the image with the wide dynamic range by the selecting device and the selecting device selects the transmitted image data with the a largest luminance distribution of the transmitted image data.

15. (Currently Amended) A capsule endoscope ~~system~~ apparatus according to Claim 12, wherein ~~the~~ an amount of data after compressing the transmitted image data is used as a comparison standard for extracting the image with the wide dynamic range by the selecting device.

16. (Currently Amended) A capsule endoscope system ~~according to Claim 15,~~
having an illuminating device, an image pick-up device for picking up an image of an illuminated portion, and a radio transmitting device, the capsule endoscope system comprising:
the illuminating device comprising a switching device which switches one of a light-emitting amount and light-emitting time;

a selecting device which transmits two or more pieces of image data obtained by

the image pick-up device by the radio transmitting device upon sequentially switching one of the light-emitting amount and light-emitting time, and extracts the image with a wide dynamic range from the two or more images transmitted by the radio transmitting device; and

a recording device which records the transmitted image data selected by the selecting device;

wherein an amount of data after compressing the transmitted image data is used as a comparison standard for extracting the image with the wide dynamic range by the selecting device and the selecting device selects the image having the a largest amount of the compressed and transmitted image data.

17. (Currently Amended) A capsule endoscope ~~apparatus system having an illuminating device, an image pick-up device for picking up an image of an illuminated portion, and a radio transmitting device, the capsule endoscope system comprising:~~

the an illuminating device for irradiating illuminating light in a body cavity comprising a switching device which switches two or more light-emitting amount or light-emitting time;

a switching device for switching illuminating conditions of the illuminating light irradiated by the illuminating device, the switching device being able to preset at least two different illuminating conditions and a switching order thereof, the switching device switching the illuminating conditions according to a set order;

an image pick-up device for sequentially picking up images of a subject, which is irradiated with illuminating light under the illuminating conditions which are different according to the switching by the switching device;

a radio device which transmits by radio waves two or more image data obtained

by the image pick-up device ~~upon sequentially switching the two or more light emitting amount or light emitting time;~~

an image processing device which generates one piece of combined image with an enlarged dynamic range from two or more pieces of transmission image data transmitted by the radio device;

a memory device which stores the combined image; and

a display device which displays the combined image.

18. (Currently Amended) A capsule endoscope apparatus ~~having an illuminating device, an image pick-up device for picking up an image of an illuminated portion, and a radio transmitting device, the capsule endoscope apparatus comprising:~~

~~the an illuminating device for irradiating illuminating light in a body cavity comprising a switching device which switches two or more light emitting amount or light emitting time;~~

a switching device for switching illuminating conditions of the illuminating light irradiated by the illuminating device, the switching device being able to preset at least two different illuminating conditions and a switching order thereof, the switching device switching the illuminating conditions according to a set order;

an image pick-up device for sequentially picking up images of a subject, which is irradiated with illuminating lights under the illuminating conditions which are different according to the switching by the switching device;

an image processing device which generates one piece of combined image with an enlarged dynamic range from two or more pieces of image data obtained by the image pick-up

~~device upon sequentially switching the two or more light emitting amount or light emitting time;~~
and

a radio device which transmits by radio waves the combined image.

19. (Currently Amended) A capsule endoscope apparatus ~~having an illuminating device, an image pick-up device for picking up an image of an illuminated portion, and a radio transmitting device, the capsule endoscope apparatus comprising:~~

~~the an~~ illuminating device using a light emitting element for irradiating illuminating light in a body cavity comprising a switching device which switches the amount of illuminating light emitted by a light emitting device; and

a switching device for switching illuminating conditions of the illuminating light irradiated by the illuminating device, the switching device being able to preset at least two different illuminating conditions and a switching order thereof, the switching device switching the illuminating conditions according to a set order;

an image pick-up device for sequentially picking up images of a subject, which is irradiated with illuminating lights under the illuminating conditions which are different according to the switching by the switching device; and

~~the a~~ radio transmitting device which transmits by radio waves a plurality of pieces of the image data obtained by the image pick-up device with two or more different amount of illuminating light.

20. (Currently Amended) A capsule endoscope apparatus according to Claim 19, wherein the ~~illuminating device has~~ light emitting element comprises a plurality of light-emitting elements at different arranging positions, and the switching device selects the light-emitting element which emits light from the plurality of light emitting ~~element elements~~ element elements and changes the

property of light distribution for the illuminating light.

21. (New) A capsule endoscope apparatus according to claim 1, wherein the illuminating conditions which are switched by the switching device are light-emitting amounts for illumination.

22. (New) A capsule endoscope apparatus according to claim 1, wherein the illuminating conditions which are switched by the switching device are light-emitting times for illumination.